



North Ave & Ethan Allen Pkwy

Intersection Alternatives Analysis

Burlington, VT



Agenda

- Existing Conditions and Traffic Operations
- Project Goals
- Proposed Alternatives
 - Intersection Concepts
 - Revised Signalized Intersection concepts
 - Roundabout concepts
 - Future Traffic Operations
- Discussion and Next Steps



Existing Conditions and Traffic Operations



Existing Conditions and Traffic Operations

- 5-way Intersection
 - Four (4) Signalized Approaches: North Ave, Ethan Allen Parkway, Driveway to Ethan Allen Park
 - One (1) Unsignalized Approach: Little Eagle Bay



The sharply skewed intersection of North Ave and Ethan Allen Pkwy



Drive access to Little Eagle Bay is unsignalized



Existing Conditions and Traffic Operations



Signalized driveway from Ethan Allen Park



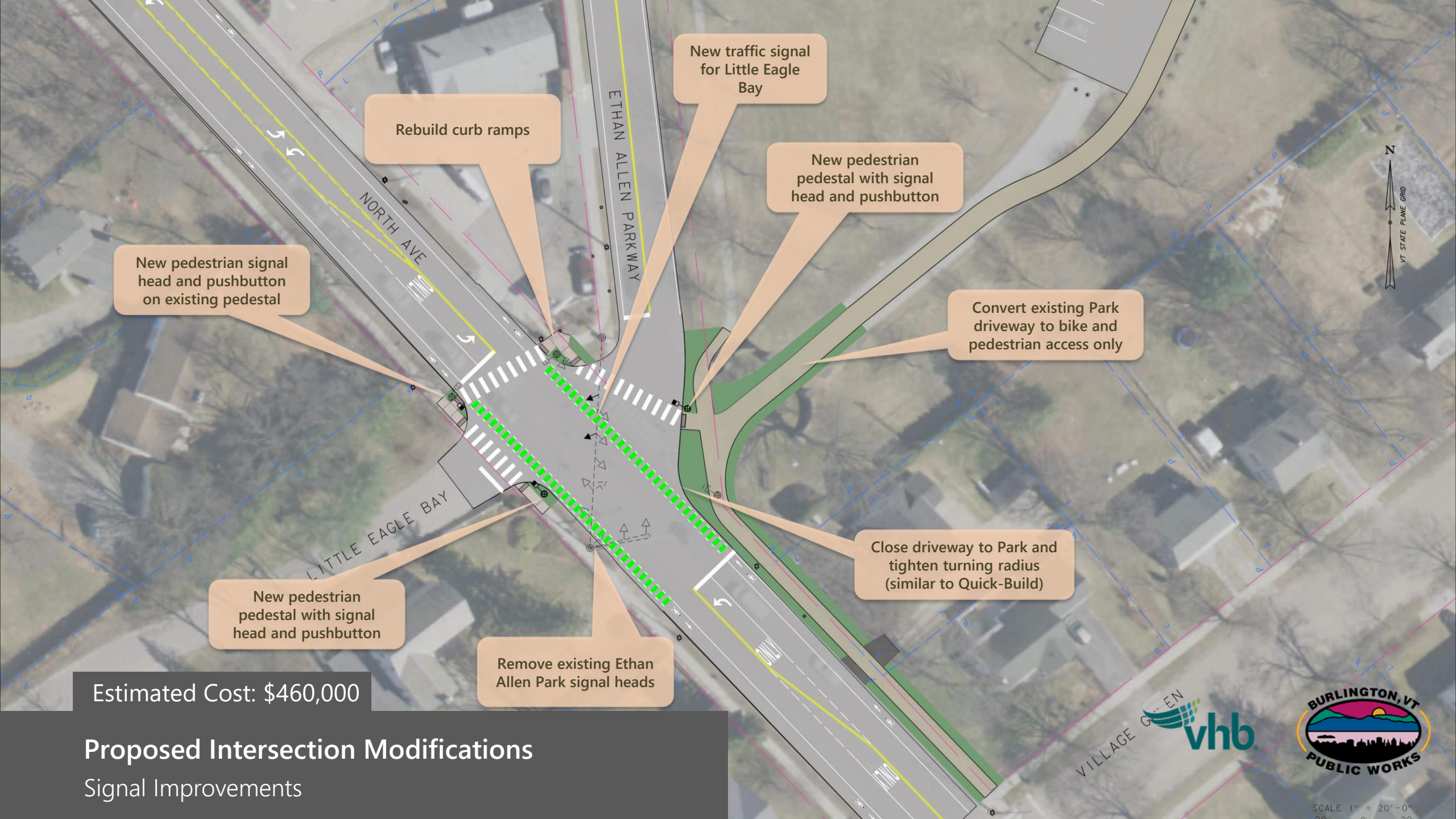
Alignment of Ethan Allen Parkway and Little Eagle driveway



Project Goals

- Evaluate intersection improvements as recommended in the North Avenue Corridor Study
- Improve intersection operations along the corridor
- Reduce vehicle queuing
- Improve bicycle and pedestrian accommodations
- Improve safety
- Reduce speeds of turning vehicles





Rebuild curb ramps

New traffic signal
for Little Eagle
Bay

New pedestrian
pedestal with signal
head and pushbutton

Convert existing Park
driveway to bike and
pedestrian access only

New pedestrian signal
head and pushbutton
on existing pedestal

Close driveway to Park and
tighten turning radius
(similar to Quick-Build)

New pedestrian
pedestal with signal
head and pushbutton

Remove existing Ethan
Allen Park signal heads

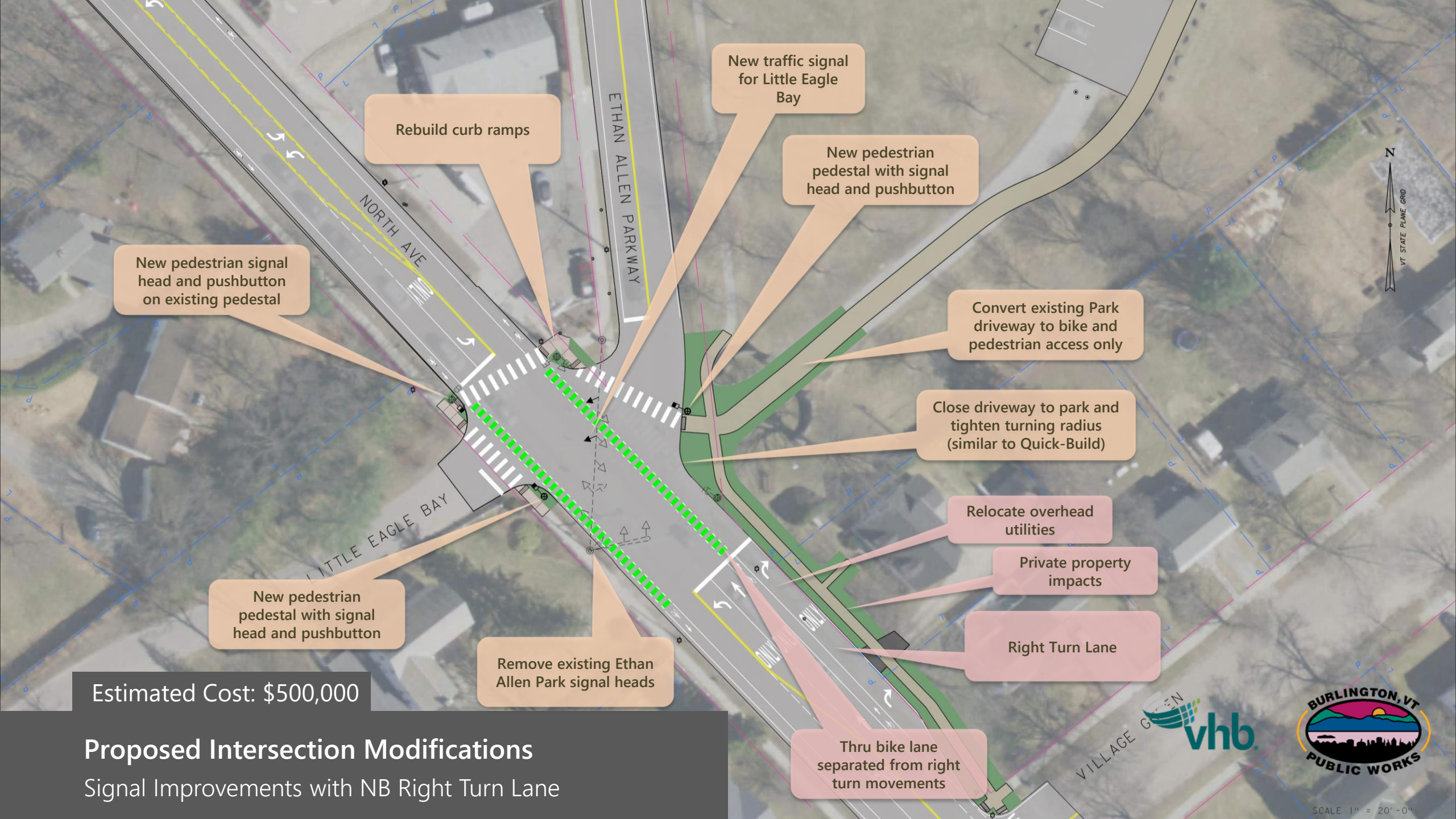
Estimated Cost: \$460,000

Proposed Intersection Modifications

Signal Improvements



SCALE 1" = 20'-0"



Rebuild curb ramps

New traffic signal
for Little Eagle
Bay

New pedestrian
pedestal with signal
head and pushbutton

Convert existing Park
driveway to bike and
pedestrian access only

Close driveway to park and
tighten turning radius
(similar to Quick-Build)

Relocate overhead
utilities

Private property
impacts

Right Turn Lane

Thru bike lane
separated from right
turn movements

Remove existing Ethan
Allen Park signal heads

New pedestrian
pedestal with signal
head and pushbutton

New pedestrian signal
head and pushbutton
on existing pedestal

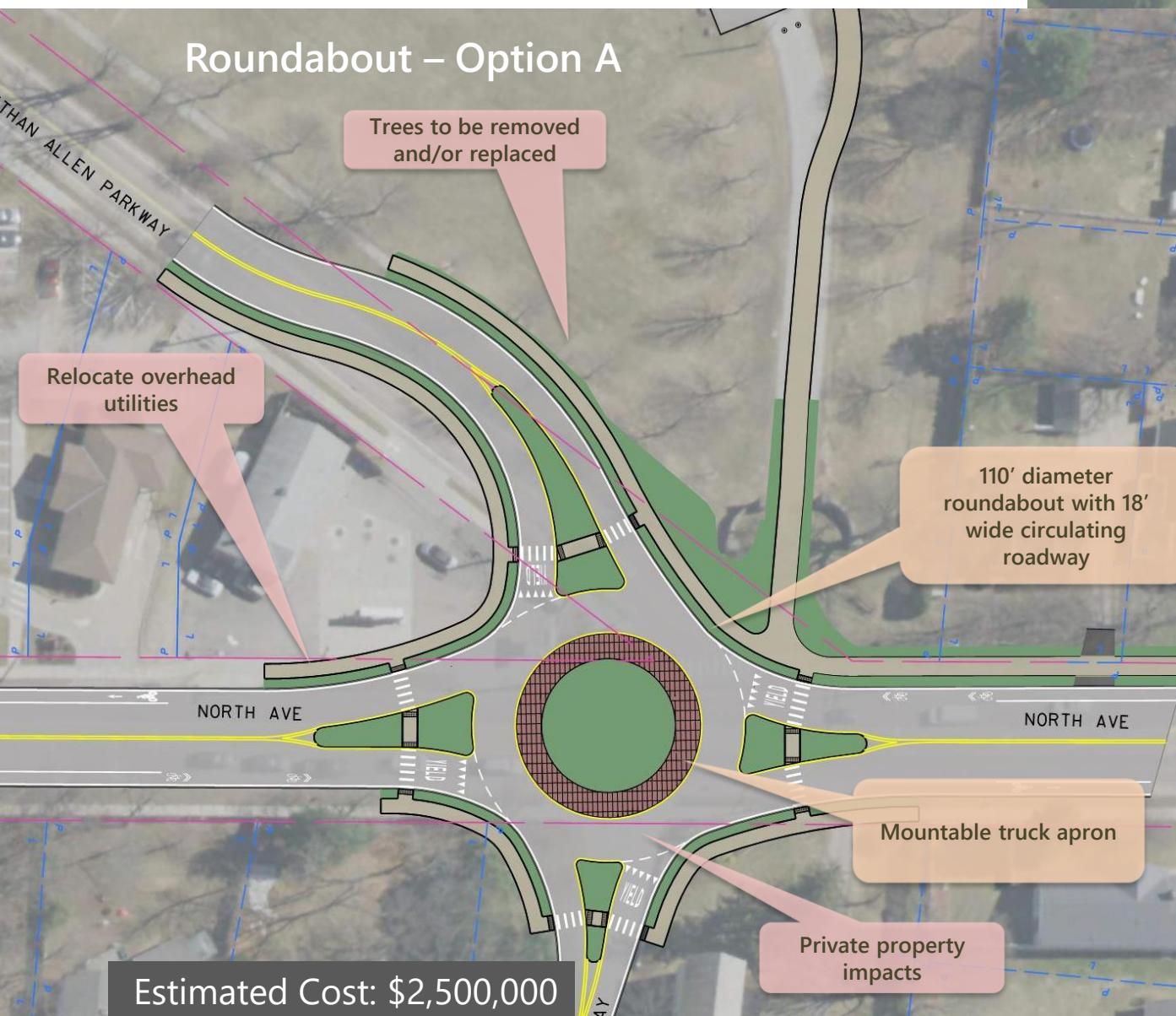
Estimated Cost: \$500,000

Proposed Intersection Modifications
Signal Improvements with NB Right Turn Lane



SCALE 1" = 20' - 0"

Roundabout – Option A



Roundabout – Option B



Roundabout – Option A and Option B

North Ave & Ethan Allen Parkway



Future Traffic Operations

Peak Hour	Approach	2024 No Build			2024 Signal Modifications			2024 Signal Modifications w NB Right Turn Lane		
		Queue	Delay	LOS	Queue	Delay	LOS	Queue	Delay	LOS
Weekday AM	EB from Little Eagle Bay	0	0.2	A	0	1.4	A	0	1.7	A
	WB from Park Entrance	7	62.0	E						
	NB from North Avenue	214	8.6	A	237	13.4	B	202	11.3	B
	SB from North Avenue	510	11.9	B	473	17.2	B	473	17.2	B
	SW from Ethan Allen Parkway	221	67.3	E	155	34.9	C	155	34.9	C
	Overall Intersection		17.9	B		18.0	B		17.4	A
Weekday PM	EB from Little Eagle Bay	2	0.3	A	0	1.4	A	0	1.0	A
	WB from Park Entrance	0	1.6	A						
	NB from North Avenue	1234	18.8	B	1326	33.0	C	705	19.0	B
	SB from North Avenue	281	7.3	A	353	11.6	B	255	12.1	B
	SW from Ethan Allen Parkway	81	25.2	C	209	148.8	F	140	97.5	F
	Overall Intersection		15.5	B		33.7	C		22.7	C

* Queue is expressed in feet

** Delay expressed in seconds per vehicle, per Synchro

*** LOS - Level of service, per Synchro



Roundabout Operations

Intersection	Peak Hour	2024 Roundabout	
		Delay	LOS
North Ave / Ethan Allen Pkwy / Little Eagle Bay	Weekday AM	4.6	A
	Weekday PM	3	A

** Delay expressed in seconds per vehicle, per Synchro

*** LOS - Level of service, per Synchro



Alternatives Comparison

Alternative	No-Build	Signal Modifications Only	Signal with Northbound Right Turn Lane	Roundabout
Improve intersection operations along the corridor	No change	No changes overall	No changes overall	Improves operations
Reduce vehicle queuing	No change	No queue reductions	Modest improvements	Queue improvements
Improve bicycle and pedestrian accommodations	No change	Reduced pedestrian crossing distance	Reduced pedestrian crossing distance	Reduced pedestrian crossing distance + improve ped visibility
Improve safety	No change	Pedestrian improvements across Ethan Allen Parkway	Thru bike lane separated from right turns	Improvements for all modes
Reduce speeds of turning vehicles	No change	NB right turns	NB right turns	Reduces speed in all directions
Cost / Impacts	No cost	\$460,000 estimated	\$500,000 estimated	\$2,500,000 estimated

Please Share Your Thoughts with Us



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